

ABSTRACT OF THE DISCLOSURE

An input filter to block noise components of motor phase current used as an input signal for a PWM motor controller. The input filter includes an integration circuit driven by a triggering signal at a frequency which is twice the frequency of operation of the inverter. In one embodiment, a first integrator is coupled directly to the motor drive current signal, and a second integrator is coupled to the motor drive current signal through a circuit which introduces a delay equal to the period of the triggering signal. The difference between the outputs of the integrators is then sampled at the triggering signal frequency. In a second embodiment, a voltage-to-time converter generates a first ramp representing the integral of the phase current signal during a first triggering interval, and a second ramp representing the integral of a reference signal, is subtracted from the value of the first ramp during a second triggering interval until value of integrator output returns to zero. In a third embodiment, a switched capacitor integration circuit is operated by a high speed clock synchronized to the triggering signal. The integrator output is sampled at the end of each triggering period and coupled to an analog to digital converter.